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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,359	10/22/2003	Gyu-Woong Lee	5000-1-471	4948
33942	7590	10/03/2006	EXAMINER SEDIGHIAN, REZA	
CHA & REITER, LLC 210 ROUTE 4 EAST STE 103 PARAMUS, NJ 07652			ART UNIT 2613	PAPER NUMBER

DATE MAILED: 10/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/691,359

Applicant(s)

LEE ET AL.

Examiner

M. R. Sedighian

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 7-9 is/are rejected.
- 7) ☒ Claim(s) 4-6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/27/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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1. In claim 3, line 1, the reference numeral "3" should change to --- 2 ---.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 1-3 and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dimmick et al. (US Patent No: 6,623,188 B1) in view of Miyamoto et al. (US Patent No: 6,865,348).

Regarding claim 1, Dimmick teaches a duobinary optical transmission apparatus (100, fig. 1), comprising: a light source for generating a carrier wave (138, fig. 1); a duobinary precoder (102, fig. 1) for encoding an input electrical signal (d, fig. 1); a semiconductor optical amplification unit (130, fig. 1) to amplify the encoded signal from the duobinary precoder (col. 7, lines 61-65), wherein the amplification unit receives an optical amplification gain difference that varies with a bias current (128, V_{bias} , fig. 1) combined with the encoded signal (col. 6, lines 62-67, col. 7, lines 1-13). Dimmick differs from the claimed invention in that Dimmick does not disclose an optical bandpass filter for filtering the received optical signal to a prescribed bandwidth. Miyamoto teaches an optical transmission system (1, fig. 1) with pre-encoding (6, fig. 1) and modulation (7, fig. 1), wherein an optical bandpass filter (8, fig. 1) is used for filtering the received optical signal to a prescribed bandwidth (col. 12, lines 1-34). Therefore, as it is taught by Miyamoto, it would have been obvious to a person of ordinary skill in the art at the time of invention to incorporate an optical bandpass filter such as the one of Miyamoto at the

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output of modulator 130 of Dimmick to provide specific and selected signals for further transmission.

Regarding claim 2, Dimmick teaches the transmission of serial data input signals (col. 6, lines 20-25). Dimmick differs from the claimed invention in that Dimmick does not specifically disclose the input signals are NRZ signals. Miyamoto teaches the transmission of NRZ input data signals (5, fig. 1) that are encoded (6, fig. 1) and drive an optical modulator (7, fig. 1). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to incorporate a method of NRZ data signal transmission, as it is taught by Miyamoto, for the input signals or as input electrical signals for the input data signals in the transmission system of Dimmick to provide a narrower frequency spectrum data modulation system.

As to claim 3, by incorporating an optical filter such as the one of Miyamoto at the output of modulator 130 of Dimmick, as discussed above, the optical filter can generate a duobinary optical signal.

Regarding claim 7, Miyamoto further teaches the optical bandpass filter controls transmission characteristics of a duobinary optical signal by adjusting its own bandwidth (col. 15, lines 7-15, col. 21, lines 3-4).

Regarding claim 8, Dimmick further teaches the light source is a semiconductor laser (col. 13, lines 55-57).

Regarding claim 9, Dimmick further teaches the semiconductor optical amplifier has a single integrated circuit configuration along with the semiconductor laser and the optical bandpass filter (col. 7, lines 14-25 and 130, fig. 1).

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4. Claims 4-6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. R. Sedighian whose telephone number is (571) 272-3034.

The examiner can normally be reached on M-F (from 9 AM to 5 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


M. R. SEDIGHIAN
PRIMARY EXAMINER